REMARKS

35 USC §112, 2nd paragraph

Claim 52 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant previously amended claim 52 as follows:

> 52. An orthodontic bracket as claimed in claim 48, wherein the archwire slot includes a notch, and wherein the end of the shutter ~~includes an end that~~ is positioned in the notch when the shutter is in the closed position.

The amendment was proposed in Applicant's After-Final amendment mailed on February 16, 2005. The amendment was not entered, but the Examiner agreed that this amendment overcomes the indefiniteness issue on page 4 of the Examiner's Answer. Applicant respectfully requests entry of this previously-submitted amendment and withdrawal of the rejection.

Obviousness-Type Double Patenting Rejections

Claims 41-57 and 59 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,257,883 (the '883 Patent), claims 1-22 of U.S. Patent No. 5,913,680 (the '680 Patent), and claims 1-15 of U.S. Patent No. 5,474,445 (the '445 Patent), each in view of U.S. Patent No. 4,634,662 issued to Rosenberg.

It is noted that, as a result of the Patent Office position on this issue, and further as a result of the more than 3 year time period from filing the application to receiving the first Office action, the Patent Office is significantly reducing the applicant's patent term for the present invention. This is particularly unfair given the fact that the various features claimed in this application are not claimed in the prior application, as described below in more detail. The Patent Office inclusion of a new basis for this rejection after the applicant has filed a Notice of Appeal and submitted an Appeal Brief, makes the present situation even more outrageous. Needless to say, the applicant is dumbfounded regarding the period of time and the amount of money it has had to pay to prosecute this application.

The '883 Patent in view of U.S. Patent 4,634,662 (Rosenberg)

The subject matter claimed in the '883 Patent relates to an "over the wing" embodiment of an orthodontic bracket and is shown by the embodiment in FIGS. 1-5 of the '883 Patent. The '883 Patent claims a bracket including a resilient locking shutter having one end pivotally engaged with a tie wing and an opposing end positioned in the archwire slot. The locking shutter is pivotable between an open position, where access to the archwire slot is permitted, and a closed position, where access to the archwire slot is inhibited. Claim 1 of the '883 Patent recites as prior art that in the open position, the locking shutter resiliently engages the tie wing. Claim 7 of the '883 Patent recites as prior art that the locking shutter slides along a labial surface of a tie wing when in a position between the open position and the closed position. The subject matter claimed by the '883 Patent is considered prior art in an obviousness-type double patenting analysis.

In the present application, all of Applicant's claims recite an orthodontic bracket having a locking shutter positioned between the tie wings, instead of "over the wing" as required by the '883 Patent. There is nothing in the claims of the '883 Patent that teaches or suggests the concept of a locking shutter positioned between the tie wings. The Examiner contends that Rosenberg teaches that it is convenient and desirable to position a locking shutter between the tie wings.

Amended claim 41 is directed to an orthodontic bracket including at least two tie wings coupled to the body and defining a space therebetween, the body and the tie wings collectively forming a notch in the labial surface that extends mesio-distally across the body approximately the same length as the archwire slot. The invention is shown in at least FIGS. 6-11 of the present application. The invention of claim 41 is not obvious in view of claims 1-13 of the '883 Patent or the teachings of Rosenberg because, alone or in combination, they do not teach or suggest the body and the tie wings collectively forming a notch in the labial surface that extends mesio-distally across the body approximately the same length as the archwire slot.

Claim 48 of the present application is directed to a self-ligating bracket having an end of the locking shutter positioned in the archwire slot when the shutter is closed wherein the end of the locking shutter includes a labial surface that is concave about an axis that is parallel to a

mesio-distal axis. This invention is shown in at least FIGS. 6-11 of the present application. The invention of claim 48 is not obvious in view of claims 1-13 of the '883 Patent a because the claims do not teach or suggest a locking shutter positioned between the tie wing with the end of the locking shutter positioned in the archwire slot when the shutter is closed and the end of the locking shutter including a labial surface that is concave about a mesio-distal axis. Rosenberg does not cure the deficiencies of the '883 Patent. The Examiner's position on the rejection of claims 48-53 is unclear as he has already withdrawn the corresponding 102(b) rejection of the same claims because Rosenberg fails to teach, suggest or disclose the claimed subject matter.

Amended claim 54 of the present application is directed to a self-ligating bracket with a body including a lingual surface for attachment to a tooth and having an archwire slot having a sidewall and a notch formed into the sidewall of the archwire slot and extending medio-distally across the body approximately the same length as the archwire slot, which is shown in at least FIGS. 6-11 of the present application. The invention of claim 54 is not obvious in view of claims 1-13 of the '883 Patent or the teachings of Rosenberg because, alone or in combination, they do not teach or suggest an orthodontic bracket including a notch formed into the sidewall of the archwire slot and extending mesio-distally across the body approximately the same length as the archwire slot.

The above-referenced features are claimed in the '883 Patent or taught by the Rosenberg Patent, alone or in combination. More specifically, the claimed subject matter of the present invention is not an obvious variant of claims 1-13 of the '883 Patent, even in view of Rosenberg. Therefore, it is respectfully submitted that claims 41-57 and 59 of the present application are not obvious variants of claims 1-13 of the '883 Patent in view of Rosenberg, and withdrawal of the corresponding rejection is requested.

The '680 Patent in view of U.S. Patent 4,634,662 (Rosenberg)

The subject matter claimed by the '680 Patent is considered prior art in an obviousness-type double patenting analysis. The subject matter of the '680 Patent relates to an orthodontic bracket including a pair of laterally spaced gingival tie wings and a pair of laterally spaced occlusal tie wings, with both the gingival and occlusal tie wings at opposed mesial and distal

sides of the bracket body being separated by an interwing region of the body; an archwire slot extending mesiodistally across the body between the gingival and occlusal tie wings; and a locking shutter.

Independent claim 1 of the '680 Patent requires a biasing means in the form of a leaf spring secured to the locking shutter intermediate its ends for resiliently urging an archwire in the archwire slot. The leaf spring extends into the archwire slot and extends mesiodistally with respective mesial and distal formations thereon extending in the archwire slot when the shutter is in a closed position. An embodiment of claim 1 of the '680 Patent is shown in FIGS. 42-45 of the '680 Patent.

Independent claims 8 and 20-22 of the '680 Patent require the locking shutter be pivotal about at least one pivot pin. Independent claim 8 requires that the locking shutter include a single loop at one end thereof to surround the pivot pin; independent claim 20 requires a lubricating or sealing agent carried by one or more of the body, locking shutter and archwire; independent claim 21 requires a stop on the body and a wedge on the locking shutter to abut the stop when the locking shutter is compressed and moved to the closed position to lock the shutter in the closed position; and independent claim 22 requires the locking shutter include a spring loaded piston accommodated by a tie wing and extending into the interwing region to lock the shutter in the closed position.

In the present application, all of Applicant's claims recite an orthodontic bracket having a locking shutter positioned between the tie wings. There is nothing in the claims of the '680 Patent that teaches or suggests the concept of a locking shutter positioned between the tie wings. The Examiner contends that Rosenberg teaches that it is convenient and desirable to position a locking shutter between the tie wings.

Amended claim 41 is directed to an orthodontic bracket including at least two tie wings coupled to the body and defining a space therebetween, the body and the tie wings collectively forming a notch in the labial surface that extends mesio-distally across the body approximately the same length as the archwire slot. The invention is shown in at least FIGS. 6-11 of the present application. The invention of claim 41 is not obvious in view of claims 1-22 of the '680 Patent or the teachings of Rosenberg because, alone or in combination, they do not teach or suggest the

body and the tie wings collectively forming a notch in the labial surface that extends mesio-distally across the body approximately the same length as the archwire slot.

Claim 48 of the present application is directed to a self-ligating bracket having an end of the locking shutter positioned in the archwire slot when the shutter is closed wherein the end of the locking shutter includes a labial surface that is concave about an axis that is parallel to a mesio-distal axis. This invention is shown in at least FIGS. 6-11 of the present application. The invention of claim 48 is not obvious in view of the claims of the '680 Patent because the claims of the '680 Patent do not teach or suggest a locking shutter positioned between the tie wing with the end of the locking shutter positioned in the archwire slot when the shutter is closed and the end of the locking shutter including a labial surface that is concave about a mesio-distal axis. Rosenberg does not cure the deficiencies of the '680 Patent. The Examiner's position on the rejection of claims 48-53 is unclear as he has already withdrawn the corresponding 102(b) rejection of the same claims because Rosenberg fails to teach, suggest or disclose the claimed subject matter.

Amended claim 54 of the present application is directed to a self-ligating bracket with a body including a lingual surface for attachment to a tooth and having an archwire slot having a sidewall and a notch formed into the sidewall of the archwire slot and extending medio-distally across the body approximately the same length as the archwire slot, which is shown in at least FIGS. 6-11 of the present application. The invention of claim 54 is not obvious in view of the claims of the '680 Patent or the teachings of Rosenberg because, alone or in combination, they do not teach or suggest a notch formed into the sidewall of the archwire slot and extending mesio-distally across the body approximately the same length as the archwire slot.

The above-referenced features are not claimed in the '680 Patent or taught by the Rosenberg Patent. More specifically, the claimed subject matter of the present invention is not an obvious variant of claims 1-22 of the '680 Patent, even in view of Rosenberg. Therefore, it is respectfully submitted that claims 41-57 and 59 of the present application are not obvious variants of claims 1-22 of the '680 Patent in view of Rosenberg, and withdrawal of the corresponding rejection is required.

The '445 Patent in view of U.S. Patent 4,634,662 (Rosenberg)

The subject matter claimed by the '445 Patent is considered prior art in an obviousness-type double patenting analysis. The subject matter of claims 1-15 of the '445 Patent relates to a self-engaging orthodontic bracket including a pair of gingival and occlusal tie wings extending buccal-labially from the lingual surface of the bracket body, a central mesiodistally extending labially opening slot for receiving an archwire, a mesiodistally extending lingual locking surface intermediate one of the pairs of tie wings, and a mesiodistally extending axis means intermediate the other pair of tie wings. The bracket further comprises a pivotal latch having a catch means at one end for locking engagement with the locking surface and a figure-eight shaped pivot means at an opposite end. The pivot means defines first and second channels for pivotally receiving the axis means such that the latch is pivotal between an open position and a closed position. In the open position the first channel receives the axis means. In the closed position the second channel receives the axis means and the catch means securely engages the locking surface.

Amended claim 41 is directed to an orthodontic bracket including at least two tie wings coupled to the body and defining a space therebetween, the body and the tie wings collectively forming a notch in the labial surface that extends mesio-distally across the body approximately the same length as the archwire slot. The invention is shown in at least FIGS. 6-11 of the present application. The invention of claim 41 is not obvious in view of claims 1-15 of the '445 Patent or the teachings of Rosenberg because, alone or in combination, they do not teach or suggest the body and the tie wings collectively forming a notch in the labial surface that extends mesio-distally across the body approximately the same length as the archwire slot.

Claim 48 of the present application is directed to a self-ligating bracket having an end of the locking shutter positioned in the archwire slot when the shutter is closed wherein the end of the locking shutter includes a labial surface that is concave about an axis that is parallel to a mesio-distal axis. This invention is shown in at least FIGS. 6-11 of the present application. The invention of claim 48 is not obvious in view of the claims of the '445 Patent because claims 1-15 of the '445 Patent do not teach or suggest a locking shutter positioned between the tie wing with the end of the locking shutter positioned in the archwire slot when the shutter is closed and the end of the locking shutter including a labial surface that is concave about a mesio-distal axis.

Rosenberg does not cure the deficiencies of the '445 Patent. The Examiner's position on the rejection of claims 48-53 is unclear as he has already withdrawn the corresponding 102(b) rejection of the same claims because Rosenberg fails to teach, suggest or disclose the claimed subject matter.

Amended claim 54 of the present application is directed to a self-ligating bracket with a body including a lingual surface for attachment to a tooth and having an archwire slot having a sidewall and a notch formed into the sidewall of the archwire slot and extending medio-distally across the body approximately the same length as the archwire slot, which is shown in at least FIGS. 6-11 of the present application. The invention of claim 54 is not obvious in view of claims 1-15 of the '445 Patent or the teachings of Rosenberg because, alone or in combination, they do not teach or suggest a notch formed into the sidewall of the archwire slot and extending mesio-distally across the body approximately the same length as the archwire slot.

The subject matter of claims 1-15 of the '445 Patent and the Rosenberg Patent do not teach or suggest the claimed subject matter of the present invention. More specifically, the claimed subject matter of the present invention is not an obvious variant of claims 1-15 of the '445 Patent, even in view of Rosenberg. Therefore, it is respectfully submitted that claims 41-57 and 59 of the present application are not obvious variants of claims 1-15 of the '445 Patent in view of Rosenberg, and withdrawal of the corresponding rejection is required.

35 U.S.C. § 102(b) Rejections

Claims 41-47, 54-57, and 59 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,634,662 (Rosenberg). Applicant takes note of Fig. 5 from Rosenberg that is reproduced in the final Office Action and the Examiner's Answer.

Claims 41-47

Claims 41-47 require at least two tie wings coupled to a body of a self-ligating bracket and defining a space therebetween. The bracket includes at least two tie wings coupled to the body and defining a space therebetween, the body and the tie wings collectively forming a notch in the labial surface that extends mesio-distally across the body approximately the same length as

the archwire slot. One example of a notch is shown in FIG. 7 and is identified by reference numeral 150. Rosenberg does not teach, suggest or disclose a bracket including a notch in the labial surface that extends mesio-distally across the body approximately the same length as the archwire slot. The Examiner identifies a "notch" in his reproduction of FIG. 5 of Rosenburg that is actually a space between the tie wings 2. Claim 41 recites a space defined between at least two tie wings and a notch in the labial surface approximately the same length as the archwire slot. As seen in FIG. 5 of Rosenberg, no notch in the labial surface of Rosenberg extends mesio-distally across the body approximately the same length as the archwire slot. Therefore, Rosenberg cannot anticipate claims 41-47 of the present application, and allowance of those claims is respectfully requested.

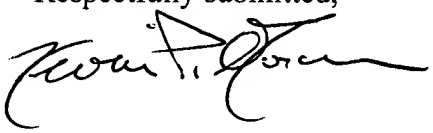
Claims 54-57 and 59

Claims 54-57 and 59 are directed to a self-ligating bracket with a body including a lingual surface for attachment to a tooth and having an archwire slot having a sidewall and a notch formed into the sidewall of the archwire slot and extending medio-distally across the body approximately the same length as the archwire slot, which is shown in at least FIGS. 6-11 of the present application. Rosenberg does not teach, suggest or disclose a self-ligating bracket with a notch formed into the sidewall of the archwire slot and extending mesio-distally across the body approximately the same length as the archwire slot. As seen in the Examiner's reproduction of FIG. 5 of Rosenberg, the "notch" does not extend nearly the same length as the archwire slot. Therefore, Rosenberg cannot anticipate claims 54-57 and 59 of the present application, and allowance of those claims is respectfully requested.

Conclusion

In view of the arguments and amendments presented herein, Applicant believes that the claims are in condition for allowance and respectfully requests withdrawal of all standing rejections. The undersigned is available for telephone conference.

Respectfully submitted,



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